

Work Order ID 129850

February-23-15 10:27:08 AM

129850

Page 1

Item ID: D212-580-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Dual Cargo Mirror Installation

Start Date: 2/17/15 Start Qty: 2.00 ***2***

Cust Item ID:

Required Date: 2/26/15 Req'd Qty: 2.00 ***2***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 1502-25 Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2161	B2
IIN-D212-580-1	B

DAS
27
9-89

1507-09

MLJ JUL 22 2015

100 Document Control 0.00

100

DC

DOCUMENT CONTROL

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels as per PPP D212-580-041 CHG004

DAS
9
9-89

JUL 22 2015

2

160 Pick Kit 0.00

160

Packaging

Memo

0.00

Packaging

DAS
27
9-89

JUL 08 2015



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 129850

February-23-15 10:27:08 AM

129850

Page 2

Item ID: D212-580-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Dual Cargo Mirror Installation
 Start Date: 2/17/15 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 2/26/15 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC4- 100% Inspect kits for completeness	0.00							
170									
QC	Memo	0.00							
Quality Control									
180		0.00							
180	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D212--580-041 Location: <u>F6010</u> PPP Rev: _____								
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

② 15-07-21 DAS 9 9-89

Z JUL 22 2015 DAS 6 9-89

MCJ JUL 22 2015
 5th 15/7/22
 MCJ JUL 22 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

February-23-15 10:27:06 AM

Page 1

Work Order ID: 129850

129850

Parent Item: D212-580-041

D212-580-041

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 2/17/15

Required Date: 2/26/15

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP Rev:H Removed D2013-3/-4 06-03-22 JLM
IPP REV:I AS PER ECN10-611 10-09-07 JLM VERIFIED
BY:DD
10.11.22 AS PER ECN10-642 DD VERF:JLM

IPP rev:J

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3439-101		Manufactured	No			100	Each	44.0000	2	4			
D3439-101									**			DAS	DAS
Mirror Assembly 8"												27	6
												9-89	9-89

DAS
9
9-89

Location

Loc Qty

Loc Code

FG
103697
ST381
115883
125449
ST383
119044

2
2
36
12
24
6
6

4

D2161-212

Manufactured No

100

Each

0.0000

1

2

D2161-212

Mirror Bracket,212

MS20426AD3-4

Purchased

No

100

Each

2,106.000

8

16

MS20426AD3-4

RIVET DAS
9
9-89

Location

Loc Qty

Loc Code

CA
125578
GA
1720
m127432
MF4
125578
ST313
125578

12
12
1720
1720
36
36
338
338

16

DAS
27
9-89

DAS
27
9-89

JUL 08 2015



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

February-23-15 10:27:07 AM

Page 2

Work Order ID: 129850

129850

Parent Item: D212-580-041

D212-580-041

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 2/17/15

Required Date: 2/26/15

Start Qty: 2.00

Required Qty: 2.00

D4164-041

Manufactured No

100

Each

186.0000

4

8

D4164-041

Nut Plate Adapter Assembly

**

DAS

27

9-89

DAS

27

9-89

DAS

9

9-89

Location

Loc Qty

Loc Code

ST090A

135

129429

135

ST096

51

101955

1

112359

3

118921

25

123400

22

MS27039-1-08

Purchased

No

100

Each

1,370.000

4

8

MS27039-1-08

Screw DAS

9

9-89

Location

Loc Qty

Loc Code

CA

96

m128636

96

FP001

498

m128636

498

GA

2

125654

2

ST285

774

m128636

774

**

DAS

27

9-89

JUL 08 2015

DAS

27

9-89

DQA: _____ Date: _____



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Transport									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DART



DESIGN	JB	DRAWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA
CHECKED	KE	APPROVED	REV. 8
DATE	99.06.07	DRAWING NO.	D2161
		TITLE	MIRROR BRACKET
		SCALE	SHEET 1 OF 1
		NTS	

A	93.04.29	NEW ISSUE
B	99.06.07	REDRAWN FOR CLARITY ADDED -204/-205/-212 DESIGNATIONS
B1	02.03.25	CHANGE FINISH
B2	02.06.14	D2037-101 WELD

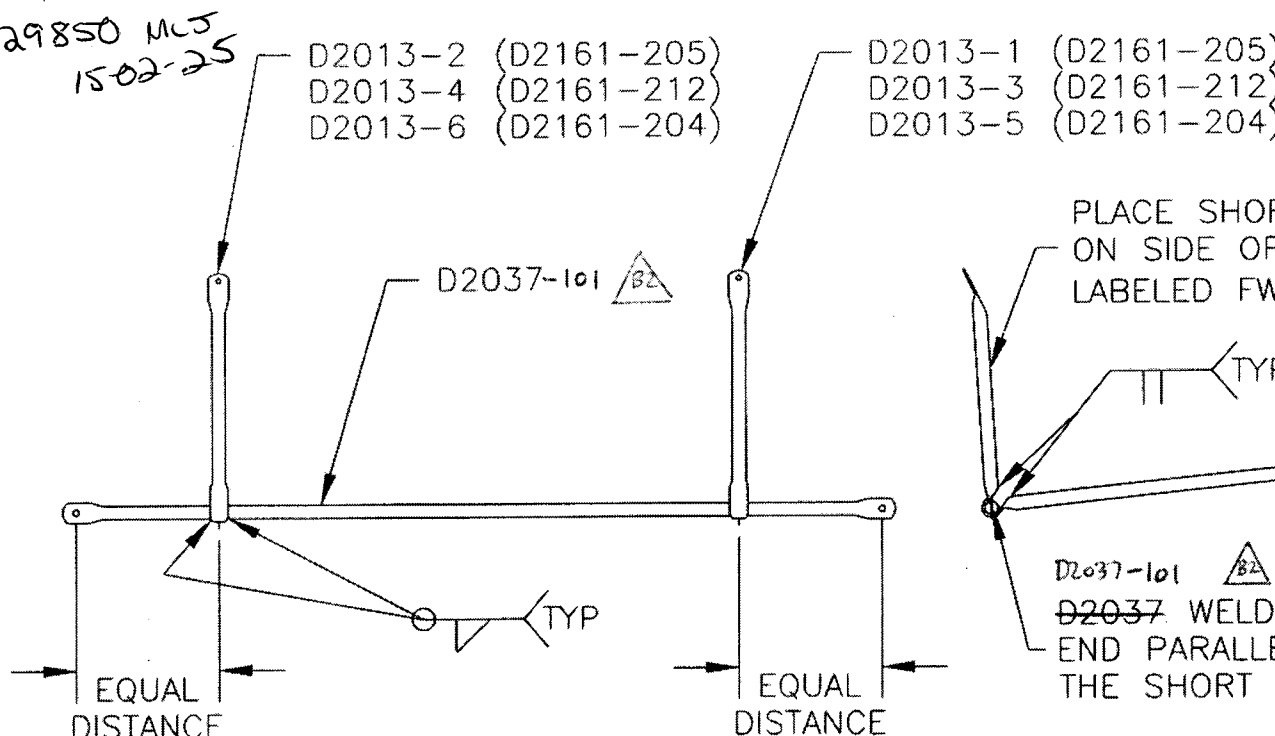
PLACE SHORTER ARM
ON SIDE OF JIG DT8065
LABELED FWD (TYP)

D2037-101
D2037 WELD FLAT
END PARALLEL TO
THE SHORT ARM

DETAIL OF D2161-204
DETAIL OF D2161-205
DETAIL OF D2161-212

NOTE: WELD ASSEMBLY
USING JIG DT8065

FINISH: ~~POWDER COAT ASSEMBLY BLACK~~
~~CRINKLE (4.3.5.3) PER DART QSI 005 4.3~~
POWDER COAT BLACK SANDTEX (4.3.5.7) PER
DART QSI 005 4.3



RELEASED
KE 99.06.10

4.0 PARTS LIST

Qty 562 -041	Qty 563 -041	Qty 580 -041	Part Number	Description
X			D204-562-041	DUAL MIRROR INSTALLATION
	X		D205-563-041	DUAL MIRROR INSTALLATION
		X	D212-580-041	DUAL MIRROR INSTALLATION
2	2	2	D3439-101	MIRROR (WAS D2011-103)
1			D2161-204	MIRROR BRACKET
	1		D2161-205	MIRROR BRACKET
		1	D2161-212	MIRROR BRACKET
*2	*2	*2	D3015-3	LOCKNUT
*2	*2	*2	AN960JD516	WASHER
		8	MS20426AD3-4	RIVET, COUNTERSUNK
		4	D4164-041	NUT PLATE ASSEMBLY
4	4	4	MS27039-1-08	SCREW

* PARTS ARE INCLUDED WITH D3439-101 MIRROR

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Revision: B

Date: 12.06.13